

# Authority Brand Soybean Herbicide Programs

## Brooklyn, WI 2023

### Trial Information

Trial Sponsor(s): FMC

Objective: Evaluate the efficacy and crop safety of Authority brand herbicides with and without metribuzin and similar competitor PRE herbicides

Crop: Enlist Soybean

Variety: P10A66E

Weed species (pressure): glyphosate-R waterhemp (moderate)  
velvetleaf (low-moderate)  
woolly cupgrass (high)

Herbicide Application(s): PRE – 5/17  
POST – 6/22 (V4/V5 soybean)

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For the full report see trial #23-BRO-SB13 in the [2023 Wisconsin Weed Science Research Report](#)



**Cropping Systems Weed Science**  
UNIVERSITY OF WISCONSIN-MADISON



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Trt #	Herbicide (rate acre <sup>-1</sup> )	Injury (%)		Waterhemp (%)				Velvetleaf (%)				Woolly Cupgrass (%)				Yield <sup>b</sup> bu acre <sup>-1</sup>	
		6/8	7/5	6/8	6/22	7/5	10/3	6/8	6/22	7/5	10/3	6/8	6/22	7/5	10/3		
1	Untreated Check	0	0	0	0	0	0	0	0	0	0	0	0	0	0	23 b	
<b>Two-Pass – PRE (5/17) fb POST<sup>c</sup> (6/22)</b>		<b>POST</b>				<b>POST</b>				<b>POST</b>				<b>POST</b>			
2	Authority Supreme (8 fl oz)	1.0	3.3	97	87	98	96	99	98	100	100	89	77	95	93	63 a	
3	Authority Supreme (8 fl oz) + Metricor DF (6 oz)	2.3	3.5	96	92	100	98	99	98	100	100	87	77	93	86	63 a	
4	Authority Edge (8 fl oz)	1.0	4.0	98	90	98	95	98	96	100	100	82	64	93	90	61 a	
5	Authority Edge (8 fl oz) + Metricor DF (6 oz)	1.3	3.3	99	90	100	95	99	99	100	100	82	67	94	87	61 a	
6	Authority First (6.4 oz)	0.3	4.0	91	76	94	89	99	100	100	100	86	67	98	93	63 a	
7	Authority First (6.4 oz) + Metricor DF (6 oz)	0.5	3.3	96	85	98	94	100	100	100	100	85	67	99	96	65 a	
8	Kyber (1 pt)	6.0	5.5	98	88	96	97	99	97	100	100	91	70	89	89	63 a	
9	Zidua PRO (6 fl oz)	0.5	5.3	93	81	95	93	100	100	100	100	89	71	98	92	63 a	
10	Boundary (29 fl oz)	2.8	3.3	98	85	100	94	76	67	100	99	77	56	88	81	61 a	
11	Anthem Maxx (4 fl oz)	1.3	5.0	89	77	93	90	90	89	100	100	86	69	88	86	64 a	
12	Anthem Maxx (4 fl oz) + Metricor DF (6 oz)	1.5	3.5	100	91	100	98	92	90	100	100	90	77	94	90	63 a	
<b>LSD (<math>\alpha=0.10</math>)</b>		<b>1.0</b>	<b>ns</b>	<b>6</b>	<b>9</b>	<b>ns</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>ns</b>	<b>ns</b>	<b>6</b>	<b>8</b>	<b>ns</b>	<b>7</b>	<b>4</b>	
<b>p value</b>		<b>&lt;.001</b>	<b>0.641</b>	<b>0.037</b>	<b>0.063</b>	<b>0.133</b>	<b>0.015</b>	<b>&lt;.001</b>	<b>&lt;.001</b>	<b>1.0</b>	<b>0.537</b>	<b>0.009</b>	<b>0.003</b>	<b>0.121</b>	<b>0.071</b>	<b>&lt;0.001</b>	

<sup>a</sup>Visual control from 70-100% is illustrated on a color scale with green representing greater weed control values.

<sup>b</sup>Yield values with the same letter are not significantly different.

<sup>c</sup>POST application - Enlist One (32 fl oz) + Liberty (32 fl oz) + AMS (2 lb/a) applied to all treatments except the untreated check.

# Authority Brand Soybean Herbicide Programs

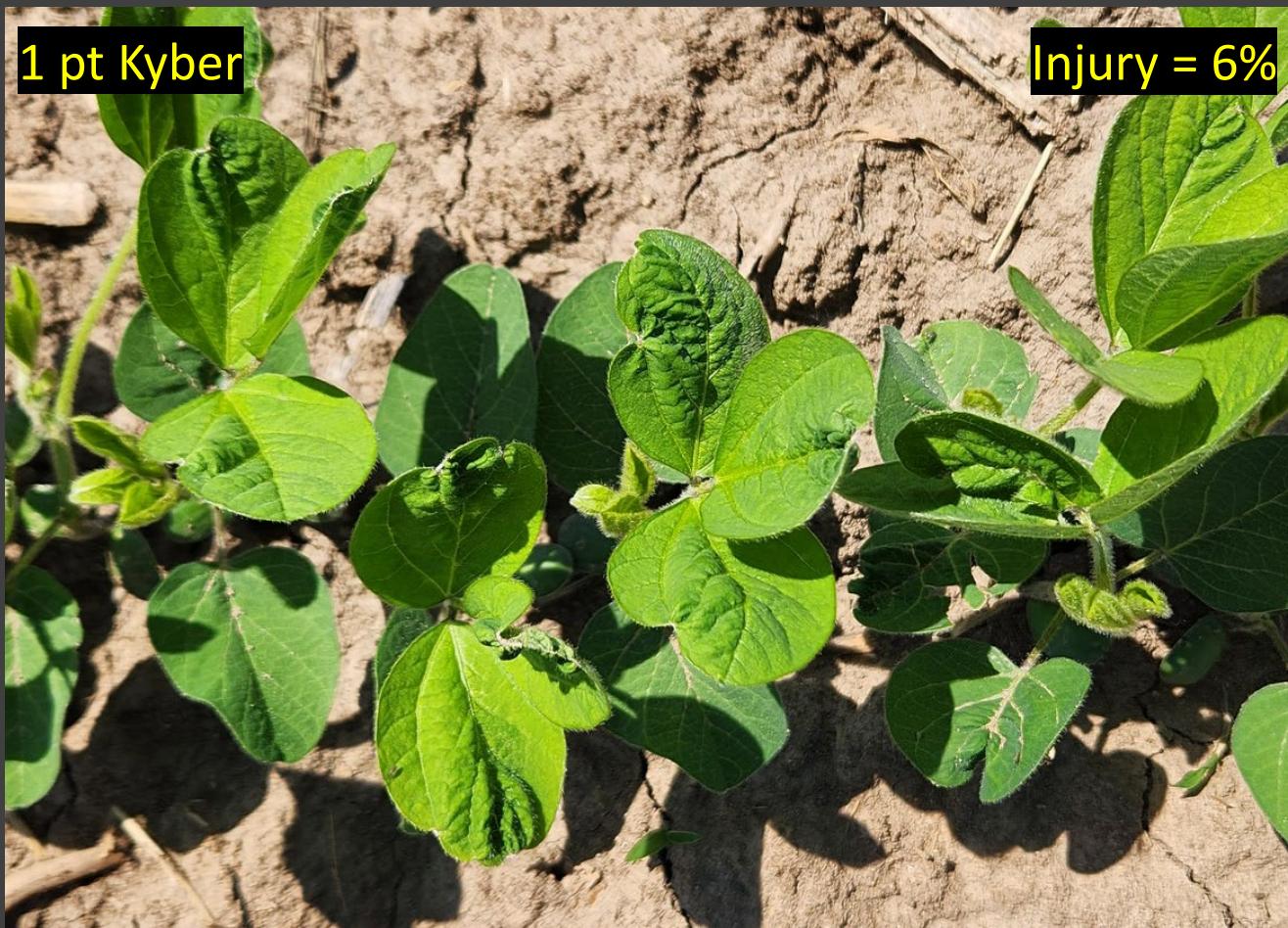
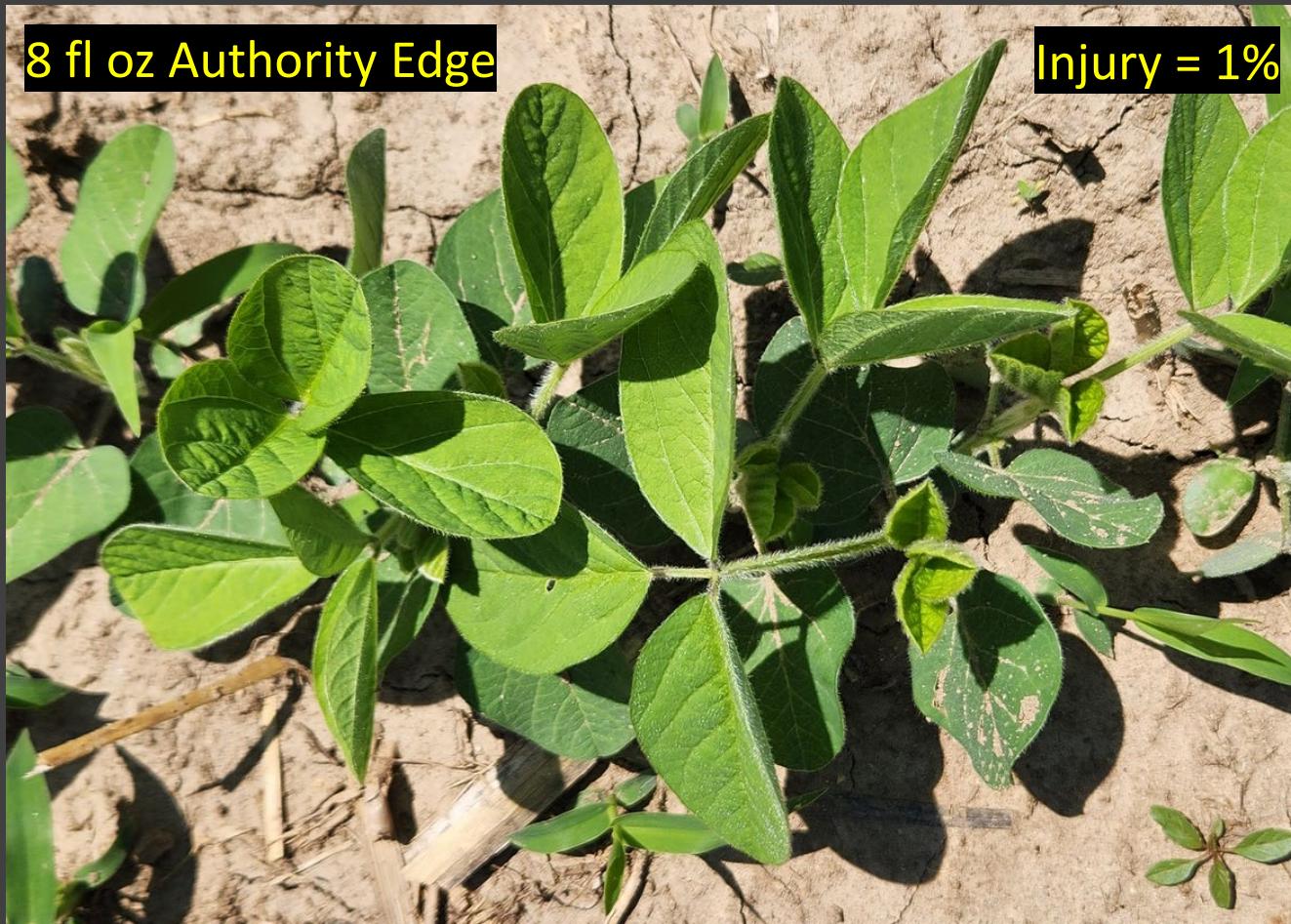
## Brooklyn, WI 2023

Plot pictures taken on 6/8  
22 days after the PRE application

The numbers in the upper right-hand corner are the average % waterhemp and woolly cupgrass control of 4 replications

# Authority Brand Soybean Herbicide Programs

## Brooklyn, WI 2023



**22 days after PRE (6/8)**  
**Untreated Check**

**0%**



**22 days after PRE (6/8)**  
**PRE: 8 fl oz Authority Supreme**

**Waterhemp = 97%**  
**Woolly Cupgrass = 89%**



22 days after PRE (6/8)  
PRE: 8 fl oz Authority Supreme + 6 oz Metricor DF

Waterhemp = 96%  
Woolly Cupgrass = 87%



**22 days after PRE (6/8)**  
**PRE: 8 fl oz Authority Edge**

**Waterhemp = 98%**  
**Woolly Cupgrass = 82%**



22 days after PRE (6/8)

PRE: 8 fl oz Authority Edge + 6 oz Metricor DF

Waterhemp = 99%

Woolly Cupgrass = 82%



**22 days after PRE (6/8)  
PRE: 6.4 oz Authority First**

**Waterhemp = 91%  
Woolly Cupgrass = 86%**



22 days after PRE (6/8)

PRE: 6.4 oz Authority First + 6 oz Metricor DF

Waterhemp = 96%

Woolly Cupgrass = 85%



22 days after PRE (6/8)  
PRE: 1 pt Kyber

Waterhemp = 98%  
Woolly Cupgrass = 91%



**22 days after PRE (6/8)**  
**PRE: 6 fl oz Zidua PRO**

**Waterhemp = 93%**  
**Woolly Cupgrass = 89%**



**22 days after PRE (6/8)  
PRE: 29 fl oz Boundary**

**Waterhemp = 98%  
Woolly Cupgrass = 77%**



**22 days after PRE (6/8)**  
**PRE: 4 fl oz Anthem Maxx**

**Waterhemp = 89%**  
**Woolly Cupgrass = 86%**



22 days after PRE (6/8)

PRE: 4 fl oz Anthem Maxx + 6 oz Metricor DF

Waterhemp = 100%

Woolly Cupgrass = 90%



# Authority Brand Soybean Herbicide Programs

## Brooklyn, WI 2023

Plot pictures taken on 6/22

36 days after the PRE application  
The day of the POST application

The numbers in the upper right-hand corner are the average % waterhemp and woolly cupgrass control of 4 replications

**36 days after PRE (6/22)**

**Untreated Check**

**0%**



**36 days after PRE (6/22)**  
**PRE: 8 fl oz Authority Supreme**

**Waterhemp = 87%**  
**Woolly Cupgrass = 77%**



36 days after PRE (6/22)

PRE: 8 fl oz Authority Supreme + 6 oz Metricor DF

Waterhemp = 92%

Woolly Cupgrass = 77%



36 days after PRE (6/22)  
PRE: 8 fl oz Authority Edge

Waterhemp = 90%  
Woolly Cupgrass = 64%



36 days after PRE (6/22)

PRE: 8 fl oz Authority Edge + 6 oz Metricor DF

Waterhemp = 90%

Woolly Cupgrass = 67%



**36 days after PRE (6/22)**  
**PRE: 6.4 oz Authority First**

**Waterhemp = 76%**  
**Woolly Cupgrass = 67%**



36 days after PRE (6/22)

PRE: 6.4 oz Authority First + 6 oz Metricor DF

Waterhemp = 85%

Woolly Cupgrass = 67%



36 days after PRE (6/22)

PRE: 1 pt Kyber

Waterhemp = 88%  
Woolly Cupgrass = 70%



**36 days after PRE (6/22)**  
**PRE: 6 fl oz Zidua PRO**

**Waterhemp = 81%**  
**Woolly Cupgrass = 71%**



36 days after PRE (6/22)  
PRE: 29 fl oz Boundary

Waterhemp = 85%  
Woolly Cupgrass = 56%



**36 days after PRE (6/22)**  
**PRE: 4 fl oz Anthem Maxx**

**Waterhemp = 77%**  
**Woolly Cupgrass = 69%**



**36 days after PRE (6/22)**

**PRE: 4 fl oz Anthem Maxx + 6 oz Metricor DF**

**Waterhemp = 91%**

**Woolly Cupgrass = 77%**



# Authority Brand Soybean Herbicide Programs

## Brooklyn, WI 2023

Plot pictures taken on 7/5

49 days after the PRE application  
13 days after POST application

The numbers in the upper right-hand corner are the average % waterhemp and woolly cupgrass control of 4 replications

**49 days after PRE (7/5)**

**Untreated Check**

**0%**



**13 days after POST (7/5)**  
**PRE: 8 fl oz Authority Supreme *fb***  
**POST: 2 pt Enlist One + 32 oz Liberty + AMS**

**Waterhemp = 98%**  
**Woolly Cupgrass = 95%**



**13 days after POST (7/5)**

**PRE: 8 fl oz Authority Supreme + 6 oz Metricor DF *fb***

**POST: 2 pt Enlist One + 32 oz Liberty + AMS**

**Waterhemp = 100%**

**Woolly Cupgrass = 93%**



**13 days after POST (7/5)**  
**PRE: 8 fl oz Authority Edge *fb***  
**POST: 2 pt Enlist One + 32 oz Liberty + AMS**

**Waterhemp = 98%**  
**Woolly Cupgrass = 93%**



**13 days after POST (7/5)**

**PRE: 8 fl oz Authority Edge + 6 oz Metricor DF *fb***

**POST: 2 pt Enlist One + 32 oz Liberty + AMS**

**Waterhemp = 100%**

**Woolly Cupgrass = 94%**



**13 days after POST (7/5)**  
**PRE: 6.4 oz Authority First fb**  
**POST: 2 pt Enlist One + 32 oz Liberty + AMS**

**Waterhemp = 94%**  
**Woolly Cupgrass = 98%**



**13 days after POST (7/5)**

**PRE: 6.4 oz Authority First + 6 oz Metricor DF fb**

**POST: 2 pt Enlist One + 32 oz Liberty + AMS**

**Waterhemp = 98%**

**Woolly Cupgrass = 99%**



13 days after POST (7/5)

PRE: 1 pt Kyber *fb*

POST: 2 pt Enlist One + 32 oz Liberty + AMS

Waterhemp = 96%

Woolly Cupgrass = 89%



**13 days after POST (7/5)**  
**PRE: 6 fl oz Zidua PRO fb**  
**POST: 2 pt Enlist One + 32 oz Liberty + AMS**

**Waterhemp = 95%**  
**Woolly Cupgrass = 98%**



**13 days after POST (7/5)**  
**PRE: 29 fl oz Boundary *fb***  
**POST: 2 pt Enlist One + 32 oz Liberty + AMS**

**Waterhemp = 100%**  
**Woolly Cupgrass = 88%**



**13 days after POST (7/5)**  
**PRE: 4 fl oz Anthem Maxx fb**  
**POST: 2 pt Enlist One + 32 oz Liberty + AMS**

**Waterhemp = 93%**  
**Woolly Cupgrass = 88%**



**13 days after POST (7/5)**

**PRE: 4 fl oz Anthem Maxx + 6 oz Metricor DF *fb***

**POST: 2 pt Enlist One + 32 oz Liberty + AMS**

**Waterhemp = 100%**

**Woolly Cupgrass = 94%**



# Authority Brand Soybean Herbicide Programs

## Brooklyn, WI 2023

Plot pictures taken on 10/3  
2 days before soybean harvest

The numbers in the upper right-hand corner are the average % waterhemp and woolly cupgrass control of 4 replications

# Soybean Harvest (10/3)

0%

## Untreated Check



**Soybean Harvest (10/3)**  
**PRE: 8 fl oz Authority Supreme *fb***  
**POST: 2 pt Enlist One + 32 oz Liberty + AMS**

**Waterhemp = 96%**  
**Woolly Cupgrass = 93%**



## Soybean Harvest (10/3)

PRE: 8 fl oz Authority Supreme + 6 oz Metricor DF *fb*

POST: 2 pt Enlist One + 32 oz Liberty + AMS

Waterhemp = 98%

Woolly Cupgrass = 86%



**Soybean Harvest (10/3)**

**PRE: 8 fl oz Authority Edge *fb***

**POST: 2 pt Enlist One + 32 oz Liberty + AMS**

**Waterhemp = 95%**

**Woolly Cupgrass = 90%**



## Soybean Harvest (10/3)

PRE: 8 fl oz Authority Edge + 6 oz Metricor DF *fb*

POST: 2 pt Enlist One + 32 oz Liberty + AMS

Waterhemp = 95%

Woolly Cupgrass = 87%



**Soybean Harvest (10/3)**  
**PRE: 6.4 oz Authority First *fb***  
**POST: 2 pt Enlist One + 32 oz Liberty + AMS**

**Waterhemp = 89%**  
**Woolly Cupgrass = 93%**



## Soybean Harvest (10/3)

PRE: 6.4 oz Authority First + 6 oz Metricor DF *fb*

POST: 2 pt Enlist One + 32 oz Liberty + AMS

Waterhemp = 94%

Woolly Cupgrass = 96%



Soybean Harvest (10/3)

PRE: 1 pt Kyber fb

POST: 2 pt Enlist One + 32 oz Liberty + AMS

Waterhemp = 97%

Woolly Cupgrass = 89%



**Soybean Harvest (10/3)**  
**PRE: 6 fl oz Zidua PRO fb**  
**POST: 2 pt Enlist One + 32 oz Liberty + AMS**

**Waterhemp = 93%**  
**Woolly Cupgrass = 92%**



**Soybean Harvest (10/3)**  
**PRE: 29 fl oz Boundary *fb***  
**POST: 2 pt Enlist One + 32 oz Liberty + AMS**

**Waterhemp = 94%**  
**Woolly Cupgrass = 81%**



**Soybean Harvest (10/3)**  
**PRE: 4 fl oz Anthem Maxx fb**  
**POST: 2 pt Enlist One + 32 oz Liberty + AMS**

**Waterhemp = 90%**  
**Woolly Cupgrass = 86%**



## Soybean Harvest (10/3)

PRE: 4 fl oz Anthem Maxx + 6 oz Metricor DF *fb*

POST: 2 pt Enlist One + 32 oz Liberty + AMS

Waterhemp = 98%

Woolly Cupgrass = 90%

